

Galaxy

SCIENCE FICTION

FEBRUARY 1958

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A CENTURY OF
NEW ANIMALS

By
**WILLY
LEY**

and Other Stories



FEBRUARY 1958

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Science Fiction

**for
your
information**



FOR YOUR INFORMATION



BY WILLY LEY

**A CENTURY OF
NEW ANIMALS**

TO begin somewhere, let us consider an utterance of a man who was just about the most famous naturalist of his time, namely Georges Léopold Chrétien Frédéric Dagobert, Baron de Cuvier. He is called both the Father of Paleontology and the Father of Comparative Anatomy, and during his lifetime he was Titular Professor at the *Jardin des Plantes* (as the Paris Zoo is still misleadingly called), Chancellor

of the University of Paris and a high government official of cabinet rank.

Georges Cuvier died 126 years ago, in 1832. Shortly before his death—say, around 1830—he said in the course of a lecture that the naturalists of the future would have to concentrate on extinct animals, since no new discoveries of large living animals were to be expected any more.

One might say that he was statistically right, even if he was wrong otherwise.

In the years since his death, several thousand species of extinct animals have been dug up and described, while only a few dozen large living animals have been discovered. And at first it must even have seemed as if Cuvier might be literally right, for two full decades went by without a noteworthy discovery. Then the "spell" was broken by the English traveler Hodgson who, in 1850, reported a new large mammal from Tibet.

It was the Takin (*Budorcas taxicolor*), also called the Gnu Antelope and best described as a very large and heavy mountain goat of dull brown color. It is rarely seen in zoological gardens, and if a garden does acquire one, the keeper is likely to be unhappy, for the Takin exudes a penetrating and offensive smell every minute of its life.

SOME five years later, there came three more discoveries, all connected with the name of Père (Father) Armand David. The home of all three is China and they were vaguely known to the Chinese.

One of them was called *bei-shun*, which simply means "white bear" and which was said to live "in the mountains" — this being Asia, that term can cover a very large number of square miles. When Father David finally got hold of one, it turned out (Fig. 1) to be the Giant Panda (*Ailuropoda melanoleucus*); its cousin, the Lesser Panda, had been known for about half a century and was usually called Himalaya Raccoon.

The second of Father David's discoveries was a monkey. Its picture was known, because Chinese artists had painted it on vases and similar items. But it had always been thought to be just an artistic convention; a monkey with such a wildly colored fur and such a "little Lulu" nose obviously could not exist. Father David proved with skins and skeletons that it did and the scientific name became *Rhinopithecus roxellanae*, often referred to as the roxellana monkey or, sometimes, snow monkey.

The third discovery was even more unusual. Father David knew, like everybody else, about a walled-in Imperial Hunting Park near Peking. He also knew that

no Chinese emperor had actually hunted there for centuries and that it was strictly forbidden to enter it. So one day he climbed the wall to see the animals inside.

Among herds of well-known game animals, Father David saw a large stag; he was sure that this animal was new to science. The Chinese called it *sse-pu-hsiang* which means "not like four" and is supposed to express the idea that the animal does *not* look like a stag, *not* like a horse, *not* like a cow and *not* like a goat. Another and simpler name, which became known later, is Milu.

Father David obtained antlers and skin — probably by bribing the guards; he never said how he did it — and sent them to Paris. A gift of live specimens was then arranged through diplomatic channels and Alphonse Milne-Edwards in Paris gave the scientific name *Elaphurus davidianus*, popularly known as Père David's Deer (Fig. 2).

The subsequent history of Père David's Deer is one of those stories one would not believe if one read it in a novel. Père David's Deer existed *only* in the Imperial Hunting Park; it had become extinct everywhere else centuries ago. Then, in 1895, there was a flood and a famine and the hungry people ate all the animals in the Imperial Park. But a few specimens of Père David's Deer had been

bought by the Duke of Bedford. They have turned into a large herd, so now the animal lives only in England (plus a few of the bigger zoological gardens).

AT the same time when Père David's Deer was described in Paris, another new animal was described in England in the Proceedings of the Zoological Society. It was an antelope, the so-called Lesser Koodoo (*Strepsiceros imberbis*) which had lived unnoticed in East Africa.

Then there was a hiatus lasting just about a decade, until 1878, when another Englishman by the name of Waller reported a new gazelle from Somaliland. It was a rather small animal as far as the body went, but it had long legs, almost like those of a giraffe, and a fairly long neck. The scientific name at first became *Gazella walleri*, which was later changed into *Litocranius* ("small skull") *walleri*.

One year later, the zoological world became even more excited by a report from Russia. A Russian traveler, Nikolai Mikhailovitch Przevalski, reported that he had found a wild horse in Central Asia. Not a wild ass, which were known to exist in quite a number of places, not a feral horse (this is the term used for the wild offspring of animals), but actually a wild horse which not only had



Fig. 1: The Giant Panda
Courtesy: Amer. Museum
of Nat. History

never been domesticated but had not even been known to exist. It was called *Equus przewalski* to the chagrin of all zoologists outside Russia, who have to learn to pronounce it as *Pshe-vall-skee*, with the accent on the *vall*.

Another wild horse entered the zoological scene only a few years later, in 1882. It was not really meant to be a discovery; it was intended as an international goodwill token. His Majesty, the Emperor Menelik of Ethiopia, gave it as a present to the president of the French republic, whose name was Grévy. It turned out to be an unknown species of zebra, the

largest of all living zebras, now known as Grevy's Zebra, or *Dolichohippus grevyi*.

In 1888, there came a shout of surprise from Australia. The discovery was physically small, but important. Australia is the continent of the marsupials or pouched mammals, but most of them were large enough and numerous enough to be quickly discovered. However, one had stayed unnoticed underfoot — literally. It was *Notoryctes typhlops*, the marsupial mole. Strangely enough, its fur is of a golden color of remarkable beauty.

The ostrich is, as everybody

Fig. 2: The first picture of Père David's Deer, published in France in 1866. The drawing was probably by a Chinese artist



knows, the largest living bird, occurring normally in northern Africa. Its scientific name is *Struthio camelus*. In 1890, a German living in East Africa sent a live ostrich to the zoological garden in Berlin, with a note explaining that it had been caught on Massai territory. After a while, the experts felt that there was something somehow wrong and soon they put their finger on the "wrongness."

The African ostrich normally has a red or reddish neck and legs. That is the northern variety. The so-called Somali ostrich has a bluish-grey neck and legs. This one, though not of the northern variety,

had a red neck and red legs. Moreover, the lower half of the long neck was covered with feathers, though normally the whole neck is nearly naked. It was a new species and was named Massai Ostrich, or *Struthio massaicus*.

ONE new bird seems to deserve another, and four years later a new and very large eagle-like bird was reported from the Philippines. It was said to eat mainly monkeys, which accounts for the scientific name of *Pithecophaga* (monkey-eater) *jefferyi*. (The name of the discoverer was Jeffery.)



Fig. 3: *Caenolestes obscurus*, a survivor from the early days of the mammals
Drawing by Olga Ley

Hard on the heels of the news of the monkey-eating bird came a chance discovery, made by the experts on board of the yacht of the then Prince of Monaco. The yacht was near the Azores, where local fishermen had just harpooned one of the toothed whales. The animal was too large to be handled by the fishing boats and the yacht offered its services for towing it ashore.

The whale was not quite dead and suddenly vomited the contents of its stomach, consisting mostly of torn pieces of large octopi. Among these pieces there was a damaged specimen of a seven-foot octopus that was completely unknown to science. It was named

Lepidoteuthis grimaldii and none like it has been seen or caught since.

I am trying to tell of these discoveries in chronological order, but there are some difficulties.

There is a small mammal in Ecuador which measures $9\frac{1}{2}$ inches on the average, of which $4\frac{1}{2}$ inches are tail. It was first mentioned by R. F. Tomes in 1860 and he wrote that this would be a shrew if it did not have a rudimentary pouch. The trouble was that he had an immature specimen. In 1895, another specimen, adult this time, was found and described by the English zoologist Oldfield Thomas. It was a New World marsupial, closely related to ex-

tinct forms from Patagonia, and also related to other fossils which Georges Cuvier had found near Paris. Its name became *Caenolestes* (Fig. 3) which translates as "new robber," with reference to the old robbers of Cuvier.

If *Caenolestes* failed to impress the layman, the next discovery, made in 1900, certainly did. It was the Okapi, a short-necked relative of the giraffe which lives in the Congo Forest. Henry Stanley had heard of it some eight years earlier; the natives talked about a zebra in the forest. Zoologists snorted, for zebras do not go into the forest. By 1900, when pieces of skin came to London, it seemed that they had been wrong and that this particular zebra did.

Two years later, skulls and complete skins became available and the zoologists were proved right

again—the animal was *not* a zebra and is not even striped all over. It had just happened that the striped portions of a cut-up skin had become known first.

The discovery of the Okapi (Fig. 4) was no doubt the greatest surprise since Father Armand David's finds. And Africa kept surprising zoologists.

First, in 1903, the Congo Giraffe came to light. It is only a "race," not a species, but still one should not think that a giraffe could have been overlooked for so long. One year later, a very large package arrived in London from Captain Meinertzhagen of His Majesty's East African Rifles, stationed in Kenya District. It contained an imperfect large black pelt and a perfect skull from another specimen. Quickly dubbed the Giant Forest Hog, it was new to science

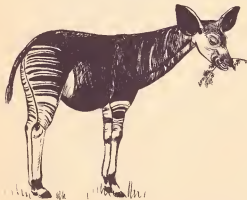


Fig. 4: The Okapi

Drawing by Olga Ley

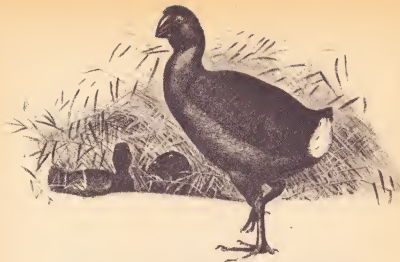


Fig. 5: The first picture of the Tokahe, published in London in 1850

(though natives had told Stanley about it) and merely the very largest species of wild pig in existence. Its scientific name became *Hylochoerus meinertzhageni*. A grown male measures six feet in length.

In 1910, one more antelope was discovered by Buxton in the southernmost portion of Ethiopia. It was named *Nyala buxtoni*.

DURING the same year, a rumor from the Far East was confirmed. On the small island of Komodo, situated between the somewhat larger islands of Sumbawa and Flores, "dragons" had been rumored to live. In a manner of speaking, the rumor was true — it was *Varanus komodoen-*

sis, the largest of the generally large monitor lizards. The biggest actually measured was 11 feet 8 inches long, but the natives said that larger ones had occasionally been taken away.

In the last year of the First World War, another unknown mammal was reported from China for the first time, but because of war and revolution, not much attention was paid to it at the time. It was a dolphin, but one living in rivers. Its name became *Lipotes vexillifer* and even now not much is known about it.

There followed a comparatively long pause of nineteen years, but then the year 1937 brought two discoveries, one from Asia and the other from Africa.



Fig. 6: The southern half of the South Island of New Zealand

The Asian discovery was nothing less than a species of wild cattle, the Kouprey (*Bos sauveli*), which had somehow managed to live unnoticed in Indochina; probably often seen, sometimes shot, but unrecognized as a scientific novelty.

The African discovery was a bird and it was by no means a chance discovery. One of the "okapi expeditions" had brought, among other things, a bundle of bird feathers acquired from natives of the Congo region by trade.

This bundle of feathers reached New York in 1915 and Dr. James P. Chapin of the American Museum of Natural History sorted them out at leisure. He could determine the origin of all the feathers but one, a rather large one which just would not fit any known bird.

Years later, in 1936, Dr. Chapin found in the Congo Museum in Tervueren (near Brussels) in Belgium two stuffed birds. They were labeled "young peacocks," but actually they were unknowns. However, they bore feathers like the one that could not be classified. Next year, Dr. Chapin shot the bird in the Congo district. It was the Congo peacock (*Afropavo congensis*), which had been familiar to the natives under the name of *itundu*.

The Congo peacock is not even especially rare!

If the Congo peacock was discovered by a systematic search, the next discovery was pure chance. It was the fish now known as *Latimeria*, a very strange fish indeed, a so-called *coelacanth* which was rather well known as a fossil.

But everybody was convinced that this type had become extinct some 50 million years ago. Then one was caught by a fishing vessel off the South African East Coast in December 1938. It remained the only one for many years and the blame for the failure to find more was squarely put on the Second World War.

Now we know that the zoologists had looked in the wrong area. The first *Latimeria* had been caught off East London, which is a considerable distance to the south of Madagascar. For reasons not known, it had strayed nearly 2000 miles from its home grounds, which are the waters around the Comores Islands between the African coast and the *northern* tip of Madagascar.

EVEN around the Comores Islands, this fish from the distant geological past is not frequent. Still, it is frequent enough for the islanders to have coined a special name for it — *conbessa*. Since this is French territory, the whole *Latimeria* case is in French hands, which are indubitably capable but, one suspects, a bit slow. When I wrote a column on *Latimeria* in *GALAXY* (May 1956), it was stated that a four-volume monograph on this fish was forthcoming. It still is.

Though *Latimeria* might be said to be the most important discovery

of that century of new animals, it is not the end of the story.

In 1950, the German zoologist Dr. Ingo Krumbiegel identified a new animal from its skin. It is a mountain wolf living in the South American Andes. Presumably the people who shot it — one South American dealer is said to have had four skins at one time—thought these were feral dogs. It has yet to be taken alive.

And two birds were “re-discovered,” which is to say that they were found to be still alive, even though the books said they were extinct. One was the Bermuda Cahow, the other the large and beautifully plumaged Takahe (*Notornis*) of the South Island of New Zealand (Fig. 5).

Originally the Takahe had lived all over both the North and South Islands of New Zealand, but that was before white explorers, missionaries and settlers arrived. By about 1800, though the North Island form was extinct, the somewhat different South Island form was known to be still alive.

As time went on, a few specimens came to light, all from the vicinity of Lake Te Anau, which lies inland of the New Zealand fjord area of the South Island (Fig. 6). The “last” Takahe was killed by a dog on August 7, 1898. Fortunately the owner of the dog saw at once what it was and saved the specimen for a museum.

However, enough rumors about bird footprints came out of the area so that, in November 1948, Dr. Geoffrey E. Orbell led a small expedition to the mountains to the west of Lake Te Anau. Suddenly they saw a Takahe. One member of the expedition threw a net to catch it and caught two. They were tied up to be photographed and then released again. Now the Takahe, like the Bermuda Cahow, is strongly protected by law.

I KNOW that I am now expected to go and make a few predictions of what might still be discovered. I will, but before I do so, a quick look at some statistics ought to be most instructive.

The first book that tried to systematize all living animals was the *Systema naturae* of the Swedish scientist Karl von Linné, better known by the Latinized version of his name: Carolus Linnaeus. The tenth revised edition of his book (published just 200 years ago, in 1758) is always taken to be the edition of the *Systema naturae* and listed 180 mammals, 450 birds, 400 fishes and, of the insects, 600 beetles, and not quite as many different moths and butterflies.

In 1900, no less than 3500 mammals were known (this included so-called geographical variations), 13,000 birds, 5000 reptiles and amphibians, and about 30,000

fishes. Among the insects, they counted in 1900 an almost even 100,000 *Lepidoptera* (moths and butterflies), 30,000 *Hemiptera* (leaf hoppers, bugs, etc.), 130,000 *Coleoptera* (beetles), 30,000 *Diptera* (flies, etc.), 40,000 *Hymenoptera* (wasps, bees, *et al.*), 13,000 *Odonata* (dragonflies) and so on and so forth. There were 20,000 different spiders known, 8000 worms, 50,000 molluscs (snails, etc.) and 3000 echinoderms like starfish.

A few years before this count was taken, the Prussian Academy of Science, well supplied with money at the moment, decided to produce a modern equivalent of the *Systema naturae*, reflecting the zoological knowledge at the turn of the century. They worked bravely, producing 60 volumes of zoology. Then they had to give up because one of their members, the zoologist R. Hesse, calculated that the completion of the work would take 270 years—provided that no new discoveries would be made during that time!

As regards predictions, let's start with the easiest place of all, the oceans. We know that there are unknown fish; they have been seen through the window of the bathysphere by William Beebe. They haven't been taken yet, but they will be.

The International Geophysical Year is devoting much attention

to the oceans and to ocean currents at various layers. They are not specifically after the discovery of new fishes, but it would be most surprising if they did not get a few.

Then, also in the oceans, there is the problem of the Great Sea Serpent (see my GALAXY columns for December 1956 and January 1957), which might be a mammal.

Thirdly, there seems to be a hitherto undiscovered long-necked and large marine turtle.

TAKING the continents one by one, nothing specifically is rumored from North America. South America has many rumors emanating from it, but none specific enough to start theorizing. For a while, a kind of hunt was on for surviving giant sloths, but that has died down. Though South America will probably provide a number of novelties in time, there is no way of guessing what they might be. Europe can also be very nearly written off, except for a persistent rumor about a fairly large unknown lizardlike animal in the Austrian Alps.

Africa is a different story. There are rumors in quantity and they might very well be true.

One is usually referred to as "Nandi bear" (also as *chimiset*, *nunda* and *mngwa* — don't ask me how this should be pronounced),

which probably is not a bear but a man-killing mammal, possibly feline.

The other is a river- or lake-dwelling killer of hippopotami, referred to as the *chipekwe*, or *mokéle-mbémbé* and, possibly, *lau*. What can be learned always has a few things in common—the unknown animal lives in fresh water, but can go on land. It kills hippopotami, but does not eat them. It has a long neck. And somehow the impression of a reptilian nature is conveyed.

Passing on to Asia, the main mystery and possible next discovery is the *yeti* or "abominable snowman" whom the Sherpas describe as being the same size they are (average 5 ft. 6 in.) and covered with long-haired but very thin fur of a brownish color. It is possible that this is actually a very primitive human race. Elsewhere, primitive races have been pushed by their less primitive neighbors into environments that the less primitive peoples did not want themselves. This may well have happened in Central Asia to a primitive and somewhat peculiar-looking human type.

In Australia, there is one unknown animal that may be said to be almost known. It has been seen repeatedly in the northeast part of Australia, the Cape York Peninsula. It is rather matter-of-factly described as a "cat," as large

as a strong medium-sized dog, with a head resembling that of a tiger. It is described as striped, black on gray, with sharp claws and pointed ears. One witness saw it kill a kangaroo.

The animal is obviously rare and its habitat restricted to a comparatively small area. It could be either a real "cat" from the description, a feline carnivore like a large lynx. Or else, which would be much more interesting if it turned out to be the case, it could be a marsupial carnivore like the Tasmanian Tiger.

New Zealand, finally, could harbor two more discoveries that would not be complete novelties because they have been rumored for so long. One is the Waitoreke, the only (but undiscovered) indigenous land mammal of New Zealand. I have told what is known about it in my column in the October 1956 issue. The other, rumored from the Dusky Sound area, not too far from Takahe country, is a small Moa, the type called by scientists *Megalapteryx*. Like the Takahe, this *Megalapteryx* was known to the Maori and the most recent Moa remains known are of this type. Whether there are any left is doubtful, but not impossible.

Well, that's the story. Like all stories of discovery, it has no end, properly speaking, because the end consists of opening new vistas.

— WILLY LEY

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Sworn to and subscribed before me this 26th day of September, 1957.

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